

Intellectual Capital – the Dynamics of Potential for Organizational Renewal

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Abstract

In the current knowledge economy, organisational assets have acquired intangible characteristics harnessing organisational sustainability. This study demonstrates the association between tangible and intangible assets to achieve an organisation's full potential. The emerging claimed paradigm shift is externalised through human potential. An alternative viewpoint is proposed - how intellectual capital could be considered and measured. The umbrella term of human potential entails concepts of emotional, social and knowledge potentials. The model attempts to respond to the demands and challenges of the knowledge society on intellectual capital. Primary data obtained from a sample of postgraduate students based at University in the north of Portugal, shows questionnaire responses reveal an awareness of emotional and social capitals despite it losing importance for those individuals who are gainfully employed. From this analysis, it can be inferred that human potential is a necessary condition albeit not in isolation.

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Keywords: *Intellectual Capital, Organisational Learning, Knowledge, Learning, Potential, Organisational performance, Organisational Value, Intangible Assets, Innovation, Creativity, Organisational Sustainability.*

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1. Introduction

1.1 Intellectual capital, underlying theories and frameworks

The objectives of this article are, firstly, to demonstrate the importance of Intellectual Capital (IC) as a major factor in organizational performance through knowledge development and management. Secondly, we suggest the notion of valuation and measurement are only important to these previous understandings and definitions of IC by looking at this construct in terms of intellectual potential and within that, setting forth another framework which categorizes each aspect of capital under new conceptual headings of 'potential' and 'relations'.

Organizational learning channels the knowledge stream, and therefore, ensuring that IC and organizational learning become bonded. It is thus important to highlight that knowledge is created through IC in organizations, being related to that which is rational, extensive and created in the mind. IC also includes two dimensions, namely, the intangible (tacit) and the tangible (explicit) that are in turn mutually inclusive (Kok, 2007). Furthermore, there are three domains in IC (Marr et al., 2003) namely, human capital (know-how, skills and capabilities), structural or organizational capital (networks, culture and systems) and relational or social capital (customer, relationships with stakeholders). Human capital is individual, tacit knowledge which employees hold and also entails four factors (Hudson, 1993), namely, the individual's genetic inheritance, education, experience and attitudes about life. This capital is the foundation for innovation and strategic renewal. Employees' intelligence is the core of human capital and is therefore the most difficult to codify. The measurement of IC, in economic terms, may be a difficult task given the tacit nature of IC.

Structural capital is embodied through organizational systems should support optimum intellectual performance and also organizational performance (Bontis, 1998). This environment is based on a supportive culture with a strong structural capital. Therefore, IC can be measured because there is structural capital that can be codified because it can be measured as a function of efficiency. Organizational capital arises from structural capital and is associated with the organization's security and quality (Sanchez et al., 1998). It includes the organization's rules and procedures as well its culture. The individual does not own this capital because it is an integral part of the organization.

Relational capital has knowledge at its core. This capital is inherent in the organizations' relationships with its external stakeholders, namely allied competitors, suppliers, customers, citizens. This capital can mostly be measured in the long term. This capital fosters a strategic relationship with clients and nurtures client satisfaction, loyalty and longevity. Each of these three abovementioned IC domains is riddled with confusion over boundaries and levels of analysis and function of the sub-components (Swart, 2006). All these domains observe the presence of different knowledge types, namely, the knowledge of or 'knowing what', or knowledge of an action; 'knowing how' and knowledge that functions at the meta levels as well as the 'knowing why'. This last concept represents the holistic and systemic level of understanding. 'Knowing how' entails the tacit form of knowledge. These domains are therefore all inextricably linked.

2. Creating value through intellectual capital

Individuals create knowledge that is then diffused in the organization (Argyris and Schon, 1978; Bhatt, 2000). Knowledge, in this new economy, is the most significant resource because it replaces all other resources (Drucker, 1993). Knowledge in organizations results from the interaction between tacit and explicit knowledge (Nonaka, 1995). Therefore, knowledge is considered as the basis for international competitiveness (Nonaka and Takeuchi, 1995). The critical skill inherent in the era of the knowledge economy is the ability to manage the knowledge-based intellect (Quinn, 1992). Managing the intellect is the very core of value. The literature shows that there is a clear connection between organizational learning and complexity theory (McElroy, 2000). At the root of complexity theory lie the concepts of innovation and creativity that are the very essence of the existence of knowledge organization in order for these to sustain their competitive advantage. IC is the paramount feature of this new economy and arises from the influential forces of globalization. This is a consequence of the fundamental shift from the manufacturing to the service-oriented economy. Therefore, the concept of learning organizations (LO) is fundamental to this shift as, in this strategic environment, organizations should adopt the strategic framework inherent in LOs in order to continuously adapt to the strategic environmental changes and improve their knowledge assets in order to survive (Senge, 1990; Antal et al., 1994). IC, from the strategic perspective, is used to create knowledge that reinforces value. The IC construct is therefore considered the main driving force towards achieving innovation and sustainable competitive advantage (Marr et al., 2003).

The primary source of organizational value (O'Donnell, 2004) is associated with IC that is a dynamic process. This IC construct has situated collective knowing capable of being leveraged into economic and social value. Intangible assets are considered the value drivers, which transform productive resources into value added assets (Hall, 1992). According to Allee (2000), the systemic and new age view of capital transcends the notions inherent in the Industrial Age which viewed the hard asset of capital formation related to the mechanistic models and value chain thinking – typical of the Industrial age production line. However, in this new age of the knowledge economy, capital can be linked to IC, creating value through awareness and integration of the larger value, such as social, value and knowledge networks as well as dynamic exchanges. Value should be considered as a system, which is a multi-faceted more organic whole, thus highlighting the shift in mindset from the value chain to the more dynamic world of the value network. The strength in the intangible approach is related to the power of IC and its intangible analysis in order to understand a company's unique capability and strategy thus identifying the purpose, values and uniqueness.

Organizational performance depends on the way the organization is able to capture, develop and exploit the knowledge that exists in its employees (Raychav and Sharkie, 2010). Furthermore, these authors maintain that as the sharing of their knowledge is outside of the employee's job description, knowledge sharing is therefore, discretionary and can be difficult to manage. Employees can change their attitude and behavior towards knowledge sharing. Chowdry (2005) and Politis (2003) opine that effective knowledge sharing depends on the degree of trust that exists between the people in the team. Reyachav and Sharkie (2010) consider IC to be the biggest asset of any organization. Nonaka et al. (2006, p.1179) state that: "organizational knowledge creation is the process of making available and amplifying knowledge created by individuals as well as crystallizing and connecting it with the

organizations knowledge system. In other words, what individuals come to know in their life benefits their colleagues and, eventually the larger organizations”.

3. An intellectual potential framework

There is widespread acknowledgement that the arrival of global forces has created wider access to global markets (Bontis, 1998; Edvinsson, 2000; Dumay, 2009). In turn, these have brought about continuous change and uncertainty for organizations competing in today’s global market (Chrusciel, 2006; Brooks and Nafukho, 2006). The only source of competitive advantage for organizational survival stems from the intangible strengths of organizations, which take on the form of IC (Marr et al., 2003; Chen et al., 2004; Tovstiga and Tulugurova, 2009). These intangible assets are brought about through innovation, creativity and knowledge and continuous organizational learning (Robinson and Kleiner, 1996; Bontis, 1998; Litschka et al., 2006; Brooks and Nafukho, 2006). Furthermore, these assets are achieved through employee facilitation. However, the paradox inherent in intangibles, as a concept, remains a conundrum in terms of definition and measurement because these concepts contradict each other. The definitions and models that have previously been applied have only proven that intangibles and measurement create a dichotomy due to their conflicting meanings. Instead, according to Edvinsson (2000) and Marr et al. (2003), these concepts of measurement, namely value and capital, which have arisen from accountancy and economics, need to be reflected on by a paradigm shift, incorporating a new contemporary theoretical framework, working in tune with the concept of the intangible (Dumay, 2009).

The literature proposes that performance is measured to provide accountability to shareholders, enabling organizations to devise future strategy and development, to predict future business and to manage intellectual assets. Furthermore, it can be argued that an objective method for measuring can be adopted, thus accepting the economic method over several decades (Brooks and Nafukho, 2006). However, objective measurement is not achievable based on the notion that the intangible is not physical or externally measured (Robinson and Kleiner, 1996; Chen et al., 2004). Research has provided frameworks and models that fall into line with management perspectives and have provided formulae and strategies for measuring the immeasurable. Furthermore, human beings are not owned by the organization making the notion of managing, measuring and controlling them impossible which may further result in uncertainty when measuring results. Therefore, organizations have little proof to demonstrate which features can be measured and contribute to the overall performance of the organization. The task of identifying and replicating their success may be impossible, due to the complexity of variables impacting the organisations’ success at any given stage. Furthermore, any methods that have been provided to evaluate and measure have been slow to develop and generate sufficient results to prove whether they are of any worth due to the dynamic pace of the changes in the business environment (Dumay, 2009). There is no real evidential base with which to inform organizational strategies, making any individual valuations of the process considered meaningless (Housel and Nelson, 2005).

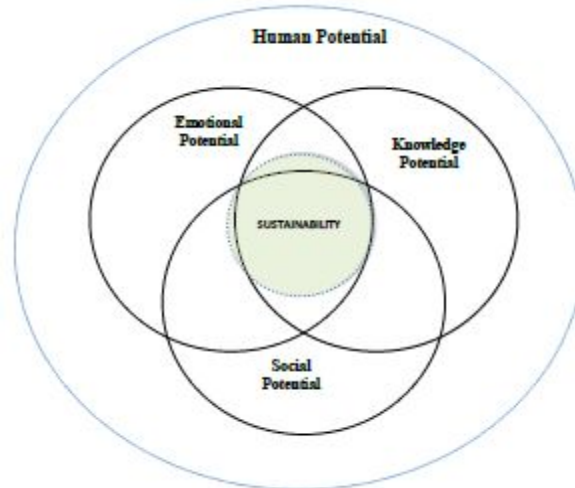
If we are to acknowledge that intangibles are a necessary feature for organizational success and sustainability, then this requires an acceptance of the incompatible nature of measurement and value as appropriate methods of gauging performance, which means academics and practitioners alike need to give up chasing the idea making an “intangible tangible” (Dumay, 2009, p.205). We propose alternative to the concepts of emotional, social and knowledge potential under the umbrella of human potential. Figure 1, below, illustrates this connection and

demonstrates a much simpler and effective way of perceiving how these potentials can interact to create innovation, new knowledge and creativity. We acknowledge that by exploring the concept of IC, this gives rise to two further categories creating yet another distinction between the concepts of assets and capital. However, for the purpose of this article we suggest the notion of valuation and measurement is only important to these previous understandings and definitions of IC.

If the construct of IC is analyzed in terms of Intellectual Potential (IP), another framework arises which categorizes each aspect of capital under new conceptual headings of ‘potential’ and ‘relations’. This promotes an understanding of the dynamics between each construct and abolishes the reductionist parameters of measurement and control. Therefore, in accordance with the systemic view, the continuous contribution of each process to the whole is possible, instead of trying to break down the constituent parts. This means that a shift of emphasis needs to be taken from seeking compartmental attributions to success, and rather, to view the processes as continually evolving which enables organizations to seek ways to enhance the continuous cycle of creativity. Thus, by focusing on constructs of emotional, knowledge and social potentials under the umbrella term of human potential, it is possible to consider a triangular process, which intersects to create new knowledge-rich sources both in tacit and explicit form, thus enhancing the process of exchange through knowledge networks and agents. The proposed shift simply requires organizations to move away from the focus of control and causation and instead to open themselves towards the potential of expansion and growth. This may give rise to conflict with the notion of managing intangibles and instead focusing on development and diversity. Therefore, this focuses on enriching intangibles through the development of employees in order to generate new knowledge from sources of knowledge networking with the wider social network.

Bontis (1998) suggests the need for a shift from the idea of money and value to focus on the value of service. Furthermore, employees have the potential to ensure sustainability due to their capacity to evolve, adapt and innovate, which can only be achieved through a process of networking and sharing, leading to natural spillover effects on other employees and the wider social community. This is reinforced by Prahalad and Hamel (1990) who opine that processing knowledge within organizations is paramount to the future sustainability of the business.

Figure 1: Human potential dynamics



Source: Martins et al. (2013)

In order to achieve this shift, it is essential to ascertain which dimensions are feeding into this new paradigm. Again there is widespread agreement that the human aspect of the organization is key to its success, therefore human potential refers to health, knowledge and skills of employees and their ability to work effectively for the organization and its relationship with wider society (Bueno et al., 2004). What makes human potential so important is its effect on the way in which the organization operates and its ability to use the potential to affect its performance (Seetharaman et al., 2008). This is based on the fact that individuals are the significant factor for the total effectiveness and value of the organization. Therefore in figure 1, the components of human potential, competence and ability stem from the interrelationship between these constructs, which will be explored in more depth.

3.1 Knowledge potential

In the knowledge-based society, the concept of intellectual capacity is an important dimension, which impacts human potential. However, due to the tacit nature of knowledge, it becomes difficult to transfer and even harder to measure. Knowledge potential is an important factor of performance as it represents the conversion of knowledge into value for the organization. Knowledge is an intangible asset, which can only be developed and improved through the carriers of that knowledge, the actual employees. Knowledge can be developed and enhanced through a process of training, development and lifelong learning. This, in turn enables employees to develop their skills and competencies to better meet customer needs and therefore communication becomes an effective process. When linked with emotional potential, knowledge potential has the capacity to enable employees to develop new knowledge and understanding based on their perceived emotional experiences once these have been converted into understanding. Therefore, these experiences then become new knowledge capable of generating more creativity and innovation.

3.1 Emotional potential

Emotional potential is recognized as a vital part towards achieving human potential resulting in unlimited benefits for the organization to tap into. It can be argued that emotional

potential is the ability to develop, manage and apply one's emotional state and to channel employees' feelings as a source of motivation and planning which will positively affect achievement. Furthermore, emotional potential provides a fundamental role in the daily activities of employees including their ability to carry out the functions of planning, organizing and motivating themselves and others, which further impacts how they think and act in any given situation. According to Brooks and Nafukho (2009), this relies on the interplay between thought and emotion hence the connection between emotional potential and knowledge potential, as thought affects emotion, emotion affects thoughts and thoughts affect understanding, which therefore means emotions affect both behavior and performance. Furthermore, the ability to manage and regulate emotions effectively can result in benefits of including skills in the areas of time management, decision making, ability, perception, self understanding and awareness, improved health, increased morale and ability to develop and maintain relationships, better team working and a culture of open learning and open communication. Moreover, the emotional transaction enhances the connection and interrelationships of organizations as it interacts with itself through its employees and its larger communities as they interact with the customer, stakeholders and competitors.

By acknowledging the power of emotions, it is possible to see how these can also produce positive and negative effects. However, through communication, feedback and feed forward, they provide essential prerequisites for innovation, further creativity and greater levels of organizational performance. Furthermore, emotions have the ability to exert influence on all those they engage with, due to the employee's ability to impact others through projection and through interpersonal skills. Moreover, they enable the employee to develop emotional ability in areas such as empathy and mechanisms for coping with stress. Understanding the effect and impact of emotions in connection to others, makes a strong case for their impact on the customer as ways of engaging with the customer because customer capital creates significant value for the organization and its performance (Chen et al., 2004). Therefore, by applying emotional skills and capability, organizations are able to develop commitment through emotional and intellectual bonds, linking the employees both to the organization and to each other. This suggests that, although emotions are tacit in nature, they have the capacity to be transferred making them a powerful resource for the organization.

3.2 Social potential

Social potential, previously identified as structural and social capital in this article, is that which remains after the human aspect is removed from the equation, leaving culture, systems, processes and policies (Litschka et al., 2006). It is also associated with the brand and structure of the organization and the variety of relationships within the economic community and associated with trust, mutual understanding, shared values, norms and behaviors as well as networks. Social capital is an innovative component that has the capacity to increase social and organizational capital through the value of human connections and personal networks. Furthermore, it acts as a conduit for information and knowledge, as well as emotion sharing. The benefits that come with social potential are the ability to develop loyalty, to generate transparency through communication, increase responsibility and honesty, to build solid networks and enable establishing relationships. Additionally, this capital has a strong impact on the following; namely, it strengthens individual capabilities for these to succeed in their community; promotes knowledge and information exchange; generates innovation; creates

further IC and also improves relationships with competitors and suppliers. Therefore, these multiple benefits impact the organizations' ability to perform strengthening their ability to take wider risks and generate further creativity, innovation and sustainability (Tovstiga and Tulugurova, 2009).

Emotional and social potentials are considered as the fundamental connection between two elements, namely (i) knowledge permeating throughout relationships achieved through the vehicle of emotional regulation, as well as (ii) through the mechanism of social networks. Therefore, generating human potential arises from complex relationships between human interactions and nurturing the potential for creativity and innovation to achieve future sustainability. Human potential arises from the inter-relational potential (Seetharaman et al., 2004) meaning that the total effectiveness and ability for the organization to perform is based on the relationships its employees have with themselves and the wider community. Furthermore, the ability to manage relationships provides the network for development of creativity and new knowledge to flow, allowing greater freedom for exploration and risk taking, which is why these conditions need to exist for the potential of relational capital to exist. This in turn, results in the creation of further intangibles, giving rise to distinctive competencies and capabilities for future sustainability.

Some barriers prevail in these proposed potentials. These can be based on the employee's unwillingness and desire to develop theory, knowledge and personal skills in order to keep in tune to the fast changing dynamic business environment. Furthermore, employees are not always aware of, nor do they understand the true importance of their role in the success of the organization. Options for overcoming these barriers can be managed through training, learning and development programmes, specifically lifelong learning. It is perceived that developed individuals need an open environment, arising from the elements in social capital, which allow for the development of their individual potential, learning to deal with one's own emotional ability and developing one's emotional intelligence, thus developing self-awareness, self-regulation, empathy and adeptness in relationships and thus creating emotional competence. However, IC cannot be taught through education and training. We could argue that the only form of control is one in which the employee exercises his/her reflective ability and self-regulation of his/her emotional potential – to include regulation of self-motivation in a constructive way so that it provides energy to expand and explore problems and solution-solving through his/her relational developments. This, in turn, will bring about greater understanding, refinement and creativity due to the combined interaction and knowledge development that comes from networking with other employees, communities and organizations through dialogue.

4. Findings, analysis and practical implications

This study endeavors to put forward a model, which responds to the demands and challenges the knowledge society imposes on IC. From the literature, it is evident the Human Potential component includes three essential factors, emotional, social and knowledge potentials. These are complementary in nature and part of the growth and development endogenous models. Thus, organizational sustainability arises from the interaction between these potentials and is conducive towards positive social economies. To determine the range of values in the organizational context, a questionnaire was distributed to a sample population which included 299 postgraduate students studying at the University of Minho (situated in the north of Portugal), of which 60,5% are male and 39,5% female. The questionnaire included items evaluated on a six-point scale Likert scale (i.e., ranging from 1, for totally agree to 6, for do not know/ prefer

not to respond). In the first instance, the focus of this study was to ascertain whether the respondents, in the first cycle of the undergraduate studies, felt that these studies alerted them to the notions of IP and its importance. The values chosen for the questionnaire included - *respect for others, autonomy, team work, creativity, enthusiasm, individual commitment, social commitment, collaboration, tolerance and solidarity*. Respondents were divided into those who were gainfully employed and those who were still not in the labor market that facilitated a better understanding of the responses obtained. The purpose was to ascertain the perceptions of how knowledge workers fulfill their roles. For this reason, despite the initial the sample being 299, it was subsequently reduced to 161 respondents. The following table highlights the positive responses obtained for the Likert scales 1 and 2 (totally agree and agree).

Table 1: Summary of responses to the range of values

Value	Total sample (n=299)	Gainfully employed sample (n=161)
Respect for others	52,8%	47,8%
Autonomy	73,2%	65,5%
Team work	73,6%	67,7%
Creativity	64,9%	58,4%
Enthusiasm	63,9%	54,5%
Individual commitment	68,6%	60,9%
Collaboration	68,9%	60,2%
Social commitment	58,9%	50,3%
Tolerance	52,5%	45,3%
Solidarity	52,2%	42,2%

Source: Martins et al. (2013)

From the above table, it can be highlighted that University graduates perceive these values as already being internalized. However, there are certain values which merit more attention, as almost 50% of the respondents revealed disinterest or a negative response towards the following values, namely: *respect for others, social commitment, tolerance, solidarity*. These four values can be considered as essential, value-adding elements in organizational performance. Moreover, focusing the analysis only on the responses from those graduates who are gainfully employed, the findings reveal a more negative scenario when compared to those unemployed graduates, which may create tension in organizations. The respondents revealed that 60% are reticent or prefer not to rate the importance of another set of values, namely, *respect for others, tolerance and solidarity*. The responses obtained reveal that respondents are aware of emotional and social capitals. However, this awareness seems to lose its importance for those who are gainfully employed. From this analysis, it can be inferred that human potential is a necessary condition although, alone, it is not sufficient to nurture the sustainability of organizations and society. In this way, it can be emphasized that sustainability in the knowledge economy arises from the constant nurturing of the mission and organizational culture.

5. Conclusion

The construct of IC and its associated concepts of value and performance have been explored in this article. A paradox seems to have emerged in the notion of intangibles, which remains a conundrum in terms of definition and measurement because of their contradiction. Current research tends to focus essentially on intangibles and measurement thereof, which seems to create a dichotomy and further confusion due to conflicting meanings. Instead, these concepts of measurement and capital, which evolved from accountancy and economics, need to be replaced by a paradigm shift, incorporating a new contemporary theoretical framework, which is in alignment with the concept of intangibles. We suggest that the concepts of emotional, social

and knowledge potential be grouped under the umbrella of human potential as an alternative, by looking at IC in terms of IP and within that construct, attempt to reflect on an alternative/unorthodox, framework which assembles each construct of capital under new conceptual headings of 'potential' and 'relations'. Therefore, the acceptance of the incompatibility in measurement and value, as appropriate methods of assessing performance, demonstrates the need to acknowledge that intangibles are a necessary element for future organizational success. Our findings tend to reveal that almost half of the respondents seem to be disinterested in those values, which can be considered as essential, value-adding elements in organizational performance. The respondents seem to be aware of emotional and social capitals nevertheless, these capitals seem to lose importance for those who are gainfully employed. From our analysis, it can be inferred that human potential is a necessary condition although, alone, it is not sufficient to nurture the sustainability of organizations and society.

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